Work	Orda	r ID	63	637

Mori Seiki CNC Lathe Large

Friday, November 05, 2010 2:42:56 PM



Page 1

D206-667-203TRN Item ID: Accept Setup Start **Revision ID:** Stop Item Name: Crosstube Turning Detail Start Qty: 1.00 Start Date: 11/5/2010 **Cust Item ID:** Req'd Qty: 1.00 **Required Date:** 11/15/2010 Customer: Reference: Run Start Date: __/O-(/-(\(\) Approvals: Tooling: Date: Stop Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Insp. Work Center ID Description **Run Hours** Code **Qty** Number **Qty** Stamp Draw Nbr **Revision Nbr** D206-667-243 Rev C 0.00 and iolilio MORI SEIKI CNC LATHE LARGE Mori Seiki 0.00 Memo Mori Seiki CNC Lathe Large 1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA089□2-Turn first side as per Folio FA089□3-File down transition lines smooth. 110 QC1- Inspect dimensions to dimension sheet 0.00 ontiolalio 0.00 Memo Quality Control 120 0.00 on Liblatio MORI SEIKI CNC LATHE LARGE Mori Seiki 0.00 Memo

1-Turn second side as per Folio FA089 \(\precede{2}\)-File down transition lines smooth.

3-Remove sand and plugs ☐ 4-Scrib part# and batch #

								t to the second
W/O:			W	ORK ORDER CHANG	ES			
DATE	STEP	PRO	PROCEDURE CHANGE			Date (Approval Chief Eng / Prod Mgr	Approval QC Inspector
						-	Prod Mgr	•
Part No:		PAR #:	Fault Cate	gory:	_ NCR: Yes	No DQA :	Date: _	
		esolution:						
NCR:		,	WORK ORD	ER NON-CONFORMA	ANCE (NCR)		
D.4TF	CTED	Description of NC	Corrective Action Section B			Verificat	ion Approval	Approval QC Inspector
DATE	SIEP	STEP Description of NC Section A		Initial Action Description Chief Eng Chief Eng		Section		
		•						
						·		
	1		1 1		1	1 .		ı

Work	Ord	or ID	6363	
WUFK	which	ег п	, 0.50.5	ı

Friday, November 05, 2010 2:42:56 PM



Page 2

Item ID:

D206-667-203TRN

Accept



Setup Start



Revision ID:

Item Name:

Crosstube Turning Detail

Start Date:

Required Date: 11/15/2010

11/5/2010

Start Qty: 1.00

Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan: _____ Date:___

Tooling:

Date:

Run

Start

Stop



QC:

Date:____

SPC (Y/N):

Date:

Stop

Sequence ID/ **Work Center ID**

130

QC

Quality Control

Operation Description

QC1- Inspect dimensions to dimension sheet

Set Up/ **Run Hours**

0.00

Tool ID

Tool # Plan Accept Code Qty

Reject Qty

Reject Insp. Number Stamp

140

Quality Control

QC8- Inspect parts - second check

Memo

Memo

150

HandFXtube

Hand Finishing Crosstubes

Crosstubes Chemical Conversion

Memo

0.00

0.00

16-11-12

W/O:			V	ORK ORDER CHANG	ES			
DATE	STEP	PRO	OCEDURE CH	ANGE	Ву	Date Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No:		PAR #:	Fault Ca	tegory:	NCR: Yes	No DQA:	Date: _	
Resolution:			Disposit	ion:	_ QA: N/C Clo	sed:	Date: _	
NCR:			WORK OR	DER NON-CONFORMA	NCE (NCR))		
DATE	STEP	Description of NC		Corrective Action Section		Verification	Approval Chief Eng	Approval QC Inspector
DATE	SILF	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C		
							-	
	<u> </u> 					·		

Work Order ID 63637

Friday, November 05, 2010 2:42:56 PM



Page 3

Item ID:

D206-667-203TRN

Accept

Setup Start



Revision ID:

Item Name:

Crosstube Turning Detail

Start Date:

11/5/2010

Start Oty: 1.00

Required Date: 11/15/2010

Req'd Otv: 1.00



Date:

Cust Item ID:

Customer:

Tool ID

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Date:

Tool # Plan

Code

Run

Accept

Otv

Start Stop

Reject

Otv

Stop



Number Stamp

Insp.

Reject

Sequence ID/ **Work Center ID**

160

Quality Control

Operation Description

QC3- Inspect Part Finish

Memo

Set Up/

SPC (Y/N):

Run Hours

0.00

0.00

0.00

Sioluliz

170

Packaging Packaging

Packaging

Identify and Stock in kanban rack Location: LG SAO 10-11-17

180

QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

10/11/15/10 N 10-11-12

W/O:			V	ORK ORDER CHAN	GES					
DATE	STEP	PRO	CEDURE CH	IANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
									1 Tod Wigi	
<u> </u>			·							
Part No: PAR #:		Fault Ca	tegory:	NCR:	Yes N	lo DQ	4:	_ Date: _		
Resolution:			Disposit	ion:	QA: f	VC Clo	sed:		Date:	
NCR:		V	VORK OR	DER NON-CONFORM	MANCE	(NCR)				
DATE	STEP	Description of NC	OT NC:		ection B	Vei		erification	Approval	Approval
DAIL	SILF	Section A	Initial Chief Eng	Action Description Chief Eng	1	Sign & Date	Secti	on C	Chief Eng	QC Inspector
			,							

Picklist Print

Friday, November 05, 2010 2:43:00 PM

Work Order ID: 63637

Parent Item:

D206-667-203TRN

Parent Item 1 ame: Crosstube Turning Detail



Start Date: 11/5/2010

Required Date: 11/15/2010

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:A 08-03-06 new issue DD verified by:ec

08.04.02 Removed polish EC verified by: DD

IPP Rev B IPP Rev C 09.01.06 ECN 08-562

EC verified by:DD

Component	Item	ID
Item Name		

Replacement Mfg/ Item ID

Purch

Bin Primary Item Location Last Location Route Seq ID Unit of Measure

Hand

Qty per Kit Total

Qty

Qty Issued Date Issued

Status

Page 1

D6004-115

Manufactured

No

100

Each

50.0000

Loc Code

Qty on

Crosstube Material

Location Loc Oty LG 50 34685 17 34774 2 → 38336 31

= and 10/1/10

W/O:			N	ORK ORDER CHAN	IGES				
DATE	STEP	PRO	CEDURE CH	ANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
				, , , , , , , , , , , , , , , , , , ,				1 Tod Wgi	,,
Part No	•	PAR #:	Fault Ca	tegory:	NCR: Yes	No DQ	A:	Date: _	
Resolution:									
NCR: WORK ORDER NON-CONFORMANCE (NCR)									
DATE	STEP	Description of NC Corrective Action			ection B	Verifi	cation		Approval
DAIL	SILP	Section A	Initial Chief Eng	Action Descriptio	n Sign Dat			Chief Eng	QC Inspector
						:			
				·					
. •									
	1	·							

DART AEROSPACE LTD	Work Order:	18637
		70-7
Description: Crosstube Assembly	Part Number:	D206-667-243
Inspection Dwg: D206-667-243 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

	spect on Sheet awing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
	2.490	+0.005/-0.000	2 495			bein	MZ
	2.018	+0.005/-0.000	2.023			4	(,
	2.079	+0.005/-0.000	2.084	/		2.1	ι,
ļ	2.145	+0.005/-0.000	2.150			4	
	2.209	+0.005/-0.000	2.214	/		17	1,
	2.287	+0.005/-0.000	2.292	/		11	1,0
A	2.363	+0.005/-0.000	2,364			1.7	٠,
SIDE	2.433	+0.005/-0.000	2,438			(,	17
0,	0.200	+/-0.010	-200			٠,	(1
	0.500 x 30°	+/-0.010	-500X30°			4	11
	R0.063	+/-0.010	R-063	_		Redonage	REF
	R0.500	+/-0.010	R-500			"	N.
	4.438	+/-0.030	4,438			Vern	ML-7
	104.91	+/-0.020	104.915			M-tape	ML-5
	2.490	+0.005/-0.000	2,495			Lien	M1-7
	2.018	+0.005/-0.000	2,023			"1	11
	2.079	+0.005/-0.000	2.084			11	()
	2.145	+0.005/-0.000	2.150			1((1
	2.209	+0.005/-0.000	2.214			.,	٤/
ω	2.287	+0.005/-0.000	2,292		·	c (′1
SIDE	2.363	+0.005/-0.000	2.364	_		`(L
୍ଷ 🌣	2.433	+0.005/-0.000	2.438			(t	()
	0.200	+/-0.010	200			- 1	• (
	0.500 x 30°	+/-0.010	:500×30			21	11
	R0.063	+/-0.010	R.063			Pad-agg	REF
	R0.500	+/-0.010	R.500	_		",5%	'/
] [4.438	+/-0.030	4.438			Vern	ML-7
	<u>:</u>						

Measured by:	and	Audited by:	6	Preliminary Approval:	N/A
Date:	10/11/10	Date:	10/11/12 -	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	06.09.01	New Issue (P/O D206-667-203)	KJ/JLM , \	111
В	10.08.25	Dwg Rev updated	KJ 🗫	BA.
				7-4

W/O:	İ		· W	ORK ORDER CHANC	GES					
DATE	STEP	PRO	OCEDURE CH	ANGE	В	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
									r rod Wigi	
Part No:		PAR #:	Fault Cat	egory:	NCR:	Yes N	o DQA	\:	_ Date: _	
Resolution:			Dispositi	on:	QA: N	/C Clos	sed:		Date: _	
NCR:		'	WORK ORI	DER NON-CONFORM	ANCE (I	NCR)				
DATE	STEP	Description of NC		Corrective Action Section B		Sign & Section C			Approval	Approval
	O.L.	Section A	Initial Chief Eng	Action Description Chief Eng		Date	Section C		Chief Eng	QC Inspector
·										

Item	Qty -243	Part Number	Description
	X	D206-667-243	CROSSTUBE ASSEMBLY (206L HIGH AFT)
	 ^-	D200-007-243	CROSSTUBE ASSEMBLT (2001 HIGH AFT)
2	1	D6004-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2892-1	SUPPORT
6	4	D3595-063-450	RUBBER CUSHION
7	4	MS21920-22	CLAMP
8	14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHE SIVE (TEXTRON/BELL SPEC. 299- 947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

1) MATERIAL: MANUFACTURED FROM D6004-115

FINISHED LENGTH = 104.91±0.020

2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2 PAINT OUTSIDE PER DART QSI 005 4.2

- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-243" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- WEIGHT: 21.9 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2892-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-22 CLAMPS WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE D2892-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0,005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SHOP COPY RETURN TO ENGINEERING UNCONTROLLED COPY SUBJECT TO AMENDMENT WITHOUT NOTICE WORK ORDER Blionos

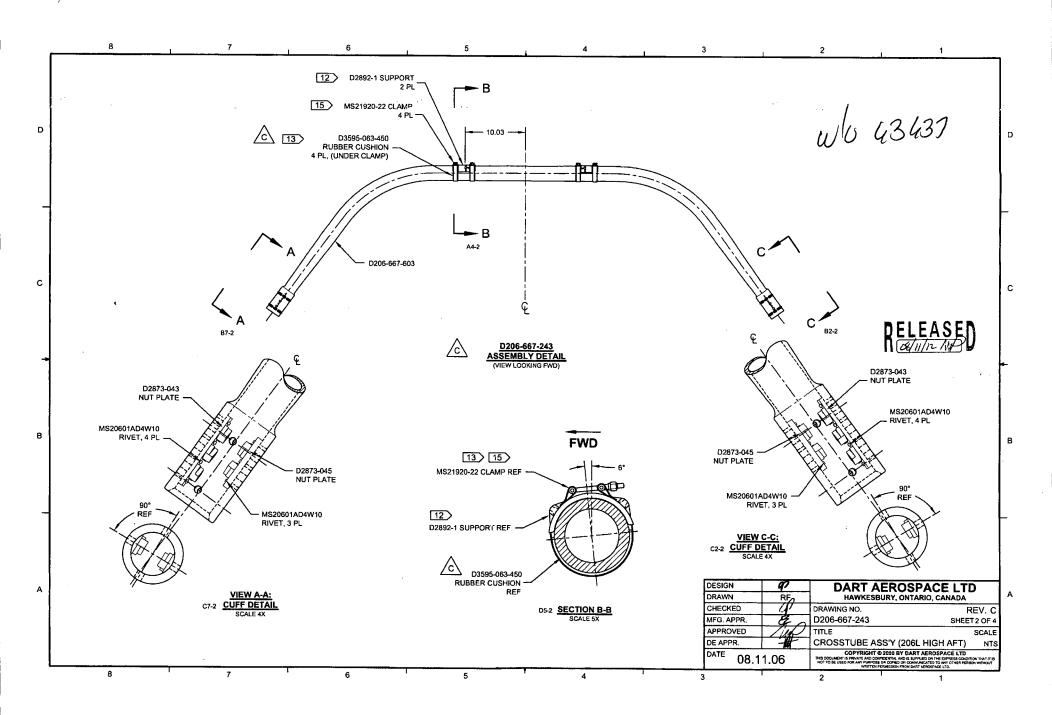


С	REORG TO CUR D3595-0 REMOV	GENERAL NO ANIZED VIEWS RENT STAND 163-450 WAS D ED REF. & AD ATED FLAG #6	RF	08.11.06			
İ		IG DETAIL & U					
В	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES				05.07.26		
Α	NEW ISSUE				00.11.17		
REV.			BY	DATE			
DESIGN P			DART AEROSP	ACE	LTD		
DRAWN		RF ₂	HAWKESBURY, ONTAR	O, CAN	ADA		
CHECK	ΣD	TIP -	DRAWING NO.		REV. C		
MFG. AF	PPR.	80	D206-667-243	SHEET 1 OF 4			
APPRO	/ED	/W	TITLE		SCALE		
DE APP	R.		CROSSTUBE ASSY (206L)	HIGH A	FT) NTS		
DATE	08.1	1.06	COPYRIGHT © 2000 BY DART AT THE DOCUMENT IS PRIVATE AND COMPONING, AND IS SUPPLIED NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNIC.	ON THE EXPRES	S CONDITION THAT IT IS		

D

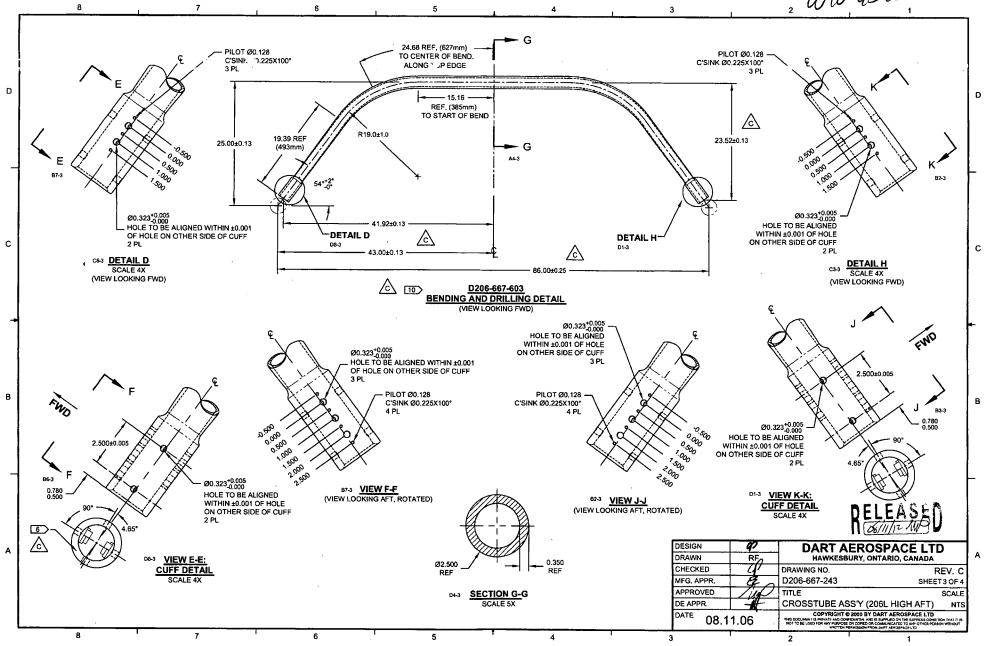
С

	-									
W/O:			W	ORK ORDER CHANG	GES					•
DATE	STEP	PRO	CEDURE CH	ANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
					į.					
Part No	•	PAR #:	Fault Cat	tegory:	_ NCR:	Yes N	lo DQ	A :	_ Date: _	
	R	esolution:	Disposit	ion:	QA: I	V/C Clo	sed:		Date:	
NCR:		V	WORK ORI	DER NON-CONFORM	ANCE	(NCR)			, (112 , . †)	
DATE	STEP	Description of NC			tion B		Verific	ation	Approval	Approval
DATE	SIEP	Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Secti	on C	Chief Eng	QC Inspector
					·					1



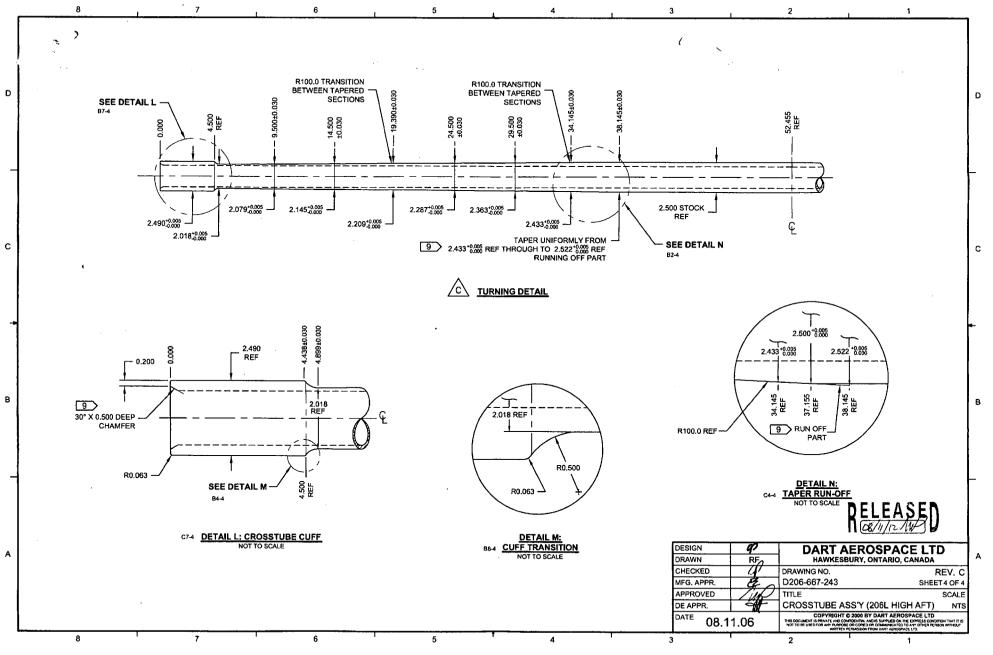
W/O:			10	ODE ODDED CHANCE					×
W/O:			V\	ORK ORDER CHANGE	:5				
DATE	STEP	PRO	OCEDURE CH	ANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
							<u> </u>		
Part No	•	PAR #:	Fault Ca	tegory:	NCR: Yes	No DQ	A:	Date:	,
	R	esolution:	Disposit	ion:	QA: N/C Cl	osed:		Date: _	
NCR:			WORK OR	DER NON-CONFORMA	NCE (NCR)			
		Description of NC		Corrective Action Section		Verific	cation	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date		ion C	Chief Eng	QC Inspector
									14.
		·			j				
		·							
	1		1		l	1		1	l .

2 wlo 43637



Dart Aerospace Ltd	.td
--------------------	-----

Dart Ae	rospace	e Ltd							1 3
W/O:			V	ORK ORDER CHANGI	ES				
DATE	STEP	PROC	CEDURE CH	IANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
						·			
				•					
Part No	:	PAR #:	Fault Ca	tegory:	NCR: Yes	No DQ	A:	Date:	
	R	esolution:	_ Disposit	ion:	_ QA: N/C Clo	sed:		Date:	<u></u>
NCR:		W	ORK OR	DER NON-CONFORMA	NCE (NCR)			
D.4.T.F.	0750	Description of NC		Corrective Action Section		Verific	cation	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date		ion C	Chief Eng	QC Inspector
									1
	-								



n	art	Δ۵	ro	ena	2	Ltd	
u	arı	AE	TO:	sva	ce	Lla	

W/O:	WORK ORDER CHANGES					2	
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
					1		
							;

Part No:	PAR #:	Fault Category:	NCR: Yes No DQA:	Date:
	Resolution:	Disposition:	QA: N/C Closed:	Date:

on B Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector
		Chief Eng	QC Inspector
1			
			:
		·	